Qin Wang（王 沁）

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Sydney, Australia   E-mail: qinwangtech@gmail.com

PORTFOLIO

- A **Research Scientist** (equiv. Lecturer in universities) at CSIRO Data61, Australia
- Dedicated to blockchain related-technologies, covering consensus, security, scalability, and economics
- Strong publications in terms of productivity and quality
- Balanced research experience and engineering skills
- A good teamwork player, evidenced with the following co-authorships and collaborative projects

EDUCATIONAL BACKGROUND

Ph.D: Swinburne University of Technology & CSIRO Data61, Melbourne, Australia. *Completed 2022*

Superviosr: *Prof. Xiang Yang* (Swinburne), *Dr. Shiping Chen* (Data61)

Major: Blockchain / Distributed System / Applied Cryptography

Faculty of Science Electronic & Technology

Sponsored by CSIRO - Australian largest research organization via its top-up scholarship

M.Eng: Beihang University (BUAA), Beijing, China. *Completed 2018*

Supervisor: *Prof. Qianhong Wu (*BUAA)

Major: Cryptography / Cryptocurrencies / Blockchain

School of Electronic and Information Engineering

Master's degree with Average Score of 87.26 (equiv. HD)

Be recommend from NPU to BUAA without National Grauate Entrance Examination

B.Eng: Northwestern Polytechnical University (NPU), Xi'an, China. *Completed 2015*

Major: Electronic Information Science and Technology

School of Electronic and Information Engineering

Bachelor's degree with Average Score of 85.18 (equiv. HD) in Top 20%

Study in the International Class, which is an elite class selected by Top 10%

RESEARCH

Full publication list can be found at [Google Scholar], [DBLP] and [ResearchGate]. Most of my papers are available online. Please kindly find them by links if required.

Conference Papers

[14] **Qin Wang***, Rujia Li*, Qi Wang, Shiping Chen, Yang Xiang. ''Exploring Unfairness on Proof of Authority: Order Manipulation Attacks and Remedies.'' ACM Asia Conference on Computer and Communications Security (AsiaCCS), 2022. (*equal contribution)

[13] Rujia Li*, **Qin Wang***, Qi Wang, David Galindo, Mark Ryan. ''SoK: TEE-assisted Confidential Smart Contract Systems.'' 22nd Privacy Enhancing Technologies Symposium (PETS), 2022.

[12] Xinrui Zhang, **Qin Wang**, Rujia Li, Qi Wang. Frontrunning Block Attack in PoA Clique: A Case Study. IEEE International Conference on Blockchain and Cryptocurrency, Poster Session (ICBC), 2022.

[11] **Qin Wang***, Rujia Li*. ''A Weak Consensus Algorithm and Its Application to High-Performance Blockchain.'' IEEE International Conference on Computer Communications (INFOCOM), 2021.

[10] Rujia Li*, **Qin Wang***, Xinrui Zhang, Qi Wang, David Galindo, Yang Xiang. ''An Offline Delegatable Cryptocurrency System.'' IEEE International Conference on Blockchain and Cryptocurrency (ICBC), 2021.

[9] Rujia Li, **Qin Wang,** Feng Liu, Qi Wang, David Galindo. ''An Accountable Decryption System based on Privacy-Preserving Smart Contracts.'' International Conference on Information Security (ISC), pp.372-390. Springer, Cham, 2021.

[8] **Qin Wang**, Jiangshan Yu, Zhiniang Peng, Van Cuong Bui, Shiping Chen, Yong Ding, Yang Xiang. ''Security Analysis on dBFT protocol of NEO.'' Financial Cryptography and Data Security (FC), pp.20-3. 2020.

[7] Bozhi Wang*, **Qin Wang***, Shiping Chen, Yang Xiang. ''Security Analysis on Tangle-based Blockchain through Simulation.'' Australasian Conference on Information Security and Privacy (ACISP), pp.20-31, 2020.

[6] Zhiyu Xu, **Qin Wang**, Ziyuan Wang, Donghai Liu, Yang Xiang, Sheng Wen. ''PPM: A Provenance-Provided Data Sharing Model for Open Banking via Blockchain.'' In Proceedings of the Australasian Computer Science Week Multiconference (ACSW), pp.1-8, 2020.

[5] Bozhi Wang, Shiping Chen, Lina Yao, **Qin Wang**. ChainSim: ''A P2P Blockchain Simulation Framework.'' CCF China Blockchain Conference, pp.1-16. 2020.

[4] Zhiyu Xu, Tengyun Jiao, **Qin Wang**, et al. ''An Efficient Supply Chain Architecture Based on Blockchain for High-value Commodities.'' Proceedings of the 2019 ACM International Symposium on Blockchain and Secure Critical Infrastructure (BSCI), pp.81-88. 2019.

[3] Ziyuan Wang, Lin Yang, **Qin Wang,** Donghai Liu, et al. ''ArtChain: Blockchain-Enabled Platform for Art Marketplace." IEEE International Conference on Blockchain, pp.447-454, 2019.

[2] Mingming Wang, Qianhong Wu, Bo Qin, **Qin Wang**, Jianwei Liu, Zhenyu Guan. ''Lightweight and Manageable Architecture of Decentralized Digital Evidence Preservation System''. 9th IEEE International Workshop on Information Forensics and Security (WIFS), 33(3), pp.568-586. 2017.

[1] Ya-Nan Li, Qianhong Wu, Wenyi Tang, Bo Qin, **Qin Wang**, Meixia Miao. ''Oursourcing Encrypted Excel System''. International Conference on Information Security Practice and Experience (ISPEC), pp.506-524. Springer, Cham, 2017.

Journal Papers

[4] **Qin Wang**, Shiping Chen, Yang Xiang. ''Anonymous Blockchain-based System for Consortium.'' ACM Transactions on Management Information Systems (TMIS), 12(3), No.26, pp.1–25. 2021.

[3] **Qin Wang**, Longxia Huang, Shiping Chen, Yang Xiang. ''Blockchain enables Your Bill Safer.'' IEEE Internet of Things Journal (IoTJ), 2020.

[2] **Qin Wang**, Bo Qin, Jiankun Hu. ''Preserving Transaction Privacy in Bitcoin''. Future Generation Computer System (FGCS), 107, pp.793-804. 2017.

[1] Jikun Huang, Bo Qin, **Qin Wang**. ''Cecoin: A Decentralized PKI Mitigating MitM Attacks''. Future Generation Computer System (FGCS), 107, pp.805-815. 2017.

Recent Preprints

[3] Rujia Li*, **Qin Wang***, Qi Wang, David Galindo. ''How Do Smart Contract Benefit Security Protocols?'' 2022.

[2] **Qin Wang**, Rujia Li, Shiping Chen, Yang Xiang. ''Formal Security Analysis on dBFT protocol of NEO.'' 2021.

[1] **Qin Wang**, Jiangshan Yu, Shiping Chen, Yang Xiang. ''SoK: Diving into DAG-based Blockchain Systems.'' 2020.

Tech Reports

[3] **Qin Wang***, Rujia Li*, Qi Wang, Shiping Chen, Mark Ryan, Thomas Hardjono. ''Exploring Web3 From the View of Blockchain.'' 2022

[2] **Qin Wang***, Rujia Li*, Qi Wang, Shiping Chen. ''Non-Fungible Token (NFT): Overview, Evaluation, Opportunities and Challenges.'' 2021.

[1] Xiaotao Feng, **Qin Wang,** Xiaogang Zhu, Sheng Wen. ''Bug Searching in Smart Contract.'' 2019.

Posters

[4] **Qin Wang***, Rujia Li*, Qi Wang. ''Poster: A Weak Consensus Algorithm and Its Application to High-Performance Blockchain.'' Proceedings of the 28th Annual Network and Distributed System Security Symposium (NDSS), 2021.

[3] Rujia Li*, **Qin Wang***, Xinrui Zhang, Qi Wang, David Galindo, Yang Xiang. ''An Offline Delegatable Cryptocurrency System.'' Proceedings of the 28th Annual Network and Distributed System Security Symposium (NDSS), 2021.

[2] **Qin Wang***, Rujia Li*, Qi Wang, David Galindo. ''Poster: Transparent Certificate Revocation for CBE Based on Blockchain.'' 41st IEEE Symposium on Security and Privacy (S&P), 2020.

[1] **Qin Wang**. ''Improving the scalability of blockchain through DAG.'' In Proceedings of the 20th International Middleware Conference Doctoral Symposium (Middleware), 2020.

Patent

[2] **Qin Wang**, Qinghua Li, Rujia Li, Xiaoming Wang. "A Method for Distributed Network Authentication based on Hareware Chips". State Intellectual Property Office of the P.R.C (SIPO). Patent Number CN2020106927967. Status: Granted. 2022 (China)

[1] Qianhong Wu, **Qin Wang.** "A Method to Improving Transaction Privacy in Bitcoin". State Intellectual Property Office of the P.R.C (SIPO). Patent Number *CN106911470B*. Status: *Granted*. 2017 (China)

Graduation Topics

PhD: ''Analysis of Blockchain Consensus Protocols''.
    Advisor: Prof. Yang Xiang (Swinburne) and Dr. Shiping Chen (Data61). 2018-2022

Master: ''Improving the Transaction Privacy in Bitcoin''.
    Advisor: Prof. Qianhong Wu (BUAA). 2015-2018

Bachelor: ''The Calculation of Depth Image based on Kinect Camera''.
    Advisor: Prof. Mingyi He (NPU). 2014-2015

WORKING EXPERIENCE

Blockchain DATA Foundation (Full Time), Beijing, China. 2018.04-2018.07
    Position: R&D of Blockchain.

High Performance Blockchain (Internship), Beijing, China. 2017.10-2018.04
    Position: R&D of Blockchain.

Samsung China Semicondutor (Internship), Xi'an, China. 2015.02
    Position: Semiconductor Engineer

Huawei Authorized Network Training Center (Internship), Xi'an, China. 2014.08
    Position: Network Engineer.

Talks

Talk (Exploring Web3), Kunyao Academy (China). July 2022. Online.
Paper presentation, PETS'22. July 2022. Online. [Video]
Paper presentation, AsiaCCS'22. May 2022. Online. [Video]
Session host, IEEE Blockchain'21. Dec 2021. Online
Paper presentation, INFOCOM'21. May 2021. Online [Video]
Paper presentation, ICBC'21. May 2021. Online [Video]
Poster presentation, NDSS'21. Feb 2021. Online
Paper presentation, ACISP'20. Dec 2020. Online [Video]
Paper presentation, ISC'20. Dec 2020. Online [Video]

Poster presentation, SP'20. May 2020. Online [Video]
Paper presentation, FC'20. Feb 2020. Kota Kinabalu, Malaysia
Poster presentation, Middleware'19. Dec 2019. Online
Talks, NSCLab. July 2019. Melbourne, Australia
Talks, CSIRO Data61. March 2019, Adelaide, Australia

Academic Services
Editorial Review Board
IJBASC (2022)
PC member
BSCI@AsiaCCS (2022)
Invited reviewer: [Publons]
2022: TDSC, TIFS, TPDS, TITS, TNET, TNSE, TNSM, ACM DLT, IoTJ,
    ESORICS, FGCS, ETT, BSEW@EASE, CSI, Cybernetics.
2021: TDSC, ETT, TIFS, PeerJ, ISJ, BCRA.
2020: TDSC, IoTJ, ESORICS, BSCI, IEEE Access.
2019: TDSC, IEEE Access, TII.
External reviewer:
ICBC (2021, 2020, 2019), ESORICS (2020), CUSR (2020, 2019), SciSec (2019)

HONORS & AWARDS
Honors
Outstanding Student Cadre, BUAA. 2016
Excellent Student, NPU (Top 30%). 2013
Scholarship
Chinese Government Award for Outstanding PhD Scholar Abroad, 2021
CSIRO Top-up PhD Scholarship, Australia. 2018-2022
National Scholarship Award, the Ministry of Education of China (Top 1%). 2017
Second Prize of Scholarship, BUAA (Top 30%). 2015
Scholarship of International Class, NPU (Top 20%). 2011-2015
Competition
The Third Prize, Mathematical Modeling Competition, NPU (Top 40%). 2013
The Second Prize, Mathematical Modeling Competition, NPU (Top 20%). 2012

EXCHANGE EXPERIENCE
National Taiwan University of Science and Technology. Taiwan, China.
    Exchange Student during 2014.02-2014.06
Pukyong National University. Busan, Korea.
    Winter Camp in 2014.02

Latest updated in July, 2022.